

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : **01-102687**  
 (43)Date of publication of application : **20.04.1989**

(51)Int.CI.

**G06F 15/70**(21)Application number : **62-258272**(71)Applicant : **NISSAN MOTOR CO LTD**(22)Date of filing : **15.10.1987**(72)Inventor : **SAITO HIROSHI  
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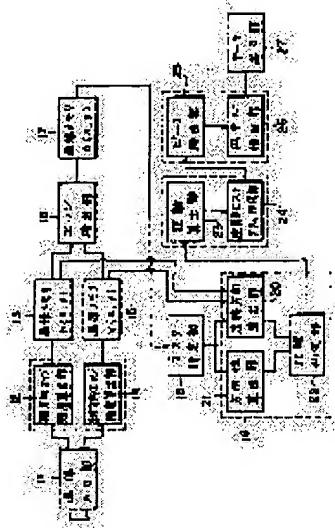
## (54) CIRCLE DETECTING DEVICE

### (57)Abstract:

**PURPOSE:** To improve the reliability of circle detection and to increase the processing speed by calculating the respective values of the normal direction of an edge constitution point and the straight line direction of the straight line connecting the edge constitution point and an optional point on an edge image, extracting the edge constitution point when the value of the straight line direction is smaller than a specific value based upon the value of the normal direction and deciding the presence of a circle.

**CONSTITUTION:** This device is equipped with edge intensity calculating means 12 and 14 which calculate lateral edge intensity and longitudinal edge intensity, a normal direction calculating means 20 which calculates the normal direction of the edge constitution point from the calculated edge intensity values, a directivity calculating means 21 which calculates the direction of the straight line connecting the edge constitution point and optional point, and a comparative decision means 22 which extracts the edge constitution point and outputs it to a histogram generating means when deciding that

the direction of the straight line is within a specific value based upon the normal direction. Then the normal direction of the edge point is detected and edge points which are not on an arc are excluded to generate a histogram. Consequently, the reliability of the circle detection is improved and the circle detection is speeded up.



### LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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